Amendments to the Claims

1 – 9 Cancelled

10. (New) A wavelength division multiplex optical ring network comprising:

optical fiber arranged in a ring configuration;

a plurality of doped fiber optical amplifiers arranged in the ring, wherein a spectral response in the ring is configured such that amplified spontaneous emission (ASE) noise circulating around the ring in a lasing mode is used to clamp a gain of each doped fiber optical amplifier; and

a controller associated with each optical amplifier to control the optical amplifier to produce a substantially constant output power or to maintain a substantially constant pump power.

11. (New) The optical network of claim 10 further comprising detector circuitry configured to switch control of the optical amplifiers to a different mode of operation responsive to detecting an absence of a lasing peak.

12. (New) The optical network of claim 11 wherein the detector circuitry is further configured to switch the optical amplifiers to a gain control mode after detecting a loss of the lasing peak to maintain a gain at substantially a level provided by the optical amplifiers prior to the detected loss.

13. (New) The optical network of claim 12 wherein the optical amplifiers are configured to switch to a constant output power mode after a predetermined delay after the gain control mode has been established.

14. (New) The optical network of claim 12 wherein the optical amplifiers are configured to switch to a constant pump power mode after a predetermined delay after the gain control mode has been established.

15. (New) The optical network of claim 11 wherein the detector circuitry further comprises:

a plurality of splitters configured to tap a fraction of each optical amplifier's input power; and

a plurality of photodiodes configured to measure the input power.

16. (New) The optical network of claim 15 wherein the plurality of splitters are further configured to tap a fraction of each optical amplifier's output power, and wherein the plurality of photodiodes are further configured to measure the output power.

17. (New) The optical network of claim 15 wherein the detector circuitry further comprises a filter to pass only ASE noise, and a peak detector to detect the presence or absence of the lasing peak.

18. (New) The optical network of claim 15 wherein the detector circuitry further comprises a filter to pass only ASE noise, and control logic to detect a simultaneous decrease in the powers of both the ASE noise peak and the total power input.

19. (New) The optical network of claim 15 wherein the detector circuitry further comprises a detector to detect a decrease in the input power to each optical amplifier.

20. (New) The optical network of claim 10 wherein a working point of the optical amplifiers is changed while in use to restore a level of the ASE peak in the event of a slow drift of the optical amplifiers.